

SAP Calculation Covering Letter



Project: Flat 4, 3 Prospect Street, Caversham, Reading, RG4 8JB

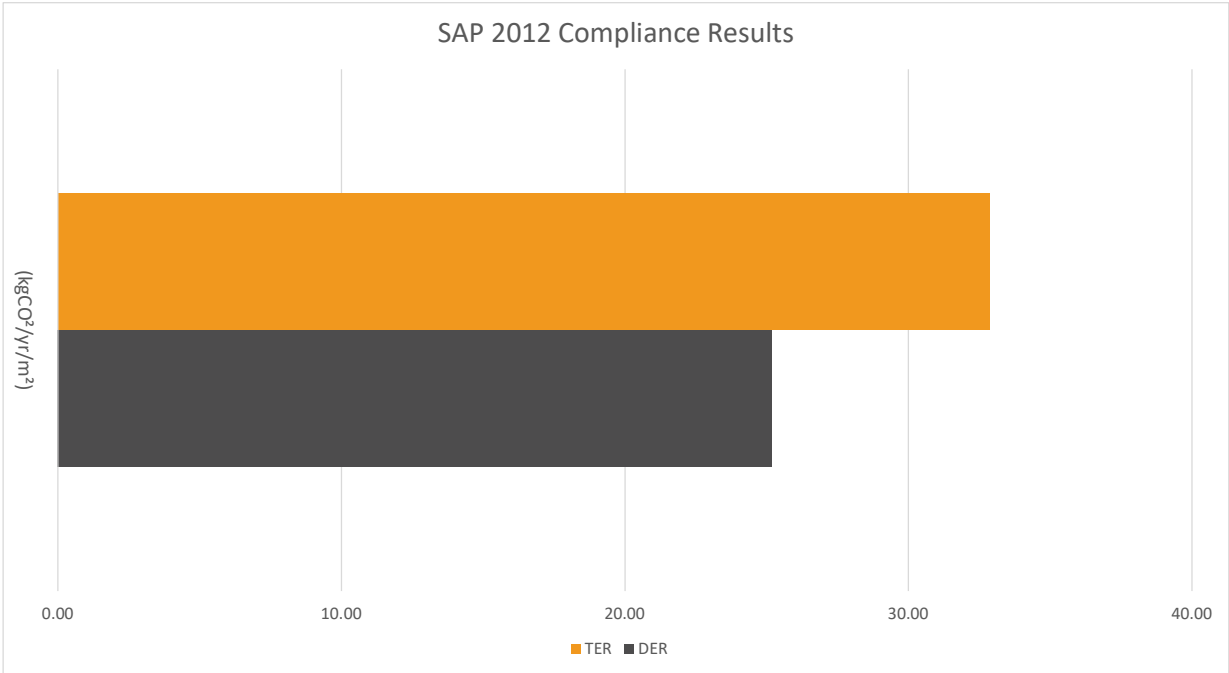
Project No. 23577

JosTec have been instructed to produce SAP calculations to demonstrate compliance with Part L of building regulations 2012/13. The results below have been taken from Elmhurst Energy Systems SAP 2012 software. To show compliance the dwelling must perform better than a notional target calculation and apply the specification applied. The dwelling must comply with all metrics to meet the criteria. The metrics are Target Emission Rate (TER) & Dwelling Emission Rate (DER). Furthermore, a reduction of 19% is required.

To make the software produce these metrics the SAPs will use the New Build assessment type, which will compare the below metrics.

- TER – Target Emission Rating
- DER – Dwelling Emission Rating

SAP 10 Compliance Results			
Metrics	TER	DER	Reduction
(kgCO ₂ /yr/m ²)	32.87	25.19	23.36%



As you can see from the tables above this dwelling has achieved compliance with both the Part L 2012/13 requirements. Should anything within this report not look correct please contact JosTec for further advice.

SUMMARY FOR INPUT DATA

Calculation Type: New Build (As Designed)

Property Reference	23577 - Flat 4 V2				Issued on Date	23/12/2024
Assessment Reference	As Designed	Prop Type Ref	New Built			
Property						
SAP Rating	82 B	DER	25.19	TER	32.87	
Environmental	84 B	% DER<TER	23.37			
CO ₂ Emissions (t/year)	1.08	DFEE	45.71	TFEE	67.16	
General Requirements Compliance	Pass	% DFEE<TFEE	31.93			
Assessor Details	Mr. Mohamed Egal, Mohamed Egal, Tel: 01923 518 923, mohamed@jostec.co.uk				Assessor ID	AW35-0001
Client	Maverick Property Investments Ltd, 23577					

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North East				
Property Tenure	Unknown				
Transaction Type	New dwelling				
Terrain Type	Suburban				
1.0 Property Type	Flat, End-Terrace				
2.0 Number of Storeys	1				
3.0 Date Built	2024				
4.0 Sheltered Sides	2				
5.0 Sunlight/Shade	Average or unknown				
6.0 Measurements					
Ground Floor:		Heat Loss Perimeter	Internal Floor Area		Average Storey Height
		27.69 m	58.65 m ²		2.76 m
7.0 Living Area	25.63		m ²		
8.0 Thermal Mass Parameter	Simple calculation - Medium				
Thermal Mass	250.00		kJ/m ² K		
9.0 External Walls					
Description	Type	U-Value (W/m ² K)		Gross Area (m ²)	Nett Area (m ²)
Exist Wall Upgr	Solid Wall	0.17		76.42	68.44
9.1 Party Walls					
Description	Type	Construction		U-Value (W/m ² K)	Area (m ²)
Party Wall 1	Solid Wall			0.00	8.22
10.0 External Roofs					
Description	Type	U-Value (W/m ² K)		Gross Area (m ²)	Nett Area (m ²)
Exist Flat Roof Upg	External Flat Roof	0.09		58.65	54.69
11.0 Heat Loss Floors					
Description	Type	Construction		U-Value (W/m ² K)	Area (m ²)
Exist Ground Floor	Ground Floor - Solid			0.12	58.65
12.0 Opening Types					

SUMMARY FOR INPUT DATA

Calculation Type: New Build (As Designed)

Description	Data Source	Type	Glazing	Glazing Gap	Argon Filled	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Windows Upg	BFRC data	Window	Double Low-E Soft 0.05			0.74			1.38
Prop Rooflights	Manufacture r	Roof Window	Double Low-E Soft 0.05			0.74		0.70	1.38

13.0 Openings

Name	Opening Type	Location	Orientation	Curtain Type	Overhang Ratio	Wide Overhang	Width (m)	Height (m)	Count	Area (m²)	Curtain Closed
E Windows	Window	[1] Exist Wall Upgr	East	Light-coloured curtain or roller blind	0.00					5.37	100
N Windows	Window	[1] Exist Wall Upgr	North	Light-coloured curtain or roller blind	0.00					2.61	100
Rooflights	Roof Window	[1] Exist Flat Roof Upg	Horizontal	Light-coloured curtain or roller blind						3.96	100

14.0 Conservatory

None

15.0 Draught Proofing

100

%

16.0 Draught Lobby

Yes

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Source Type	Bridge Type	Length	Psi	Imported
Independently assessed	E2 Other lintels (including other steel lintels)	8.51	0.023	No
Independently assessed	E3 Sill	6.10	0.024	No
Independently assessed	E4 Jamb	22.14	0.019	No
Independently assessed	E5 Ground floor (normal)	27.69	0.046	No
Table K1 - Default	E14 Flat roof	27.69	0.080	No
Independently assessed	E16 Corner (normal)	11.04	0.037	No
Independently assessed	E17 Corner (inverted – internal area greater than external area)	2.76	-0.079	No
Independently assessed	E18 Party wall between dwellings	5.52	0.031	No
Independently assessed	P1 Party wall - Ground floor	2.98	0.038	No
Independently assessed	P4 Party wall - Roof (insulation at ceiling level)	2.98	0.033	No

Y-value

0.025

W/m²K

18.0 Pressure Testing

Yes

Designed AP₅₀

5.00

m³/(h.m²) @ 50 Pa

Property Tested ?

As Built AP₅₀

m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Summer Overheating

Windows open in hot weather

Windows fully open

Cross ventilation possible

No

Night Ventilation

No

Air change rate

4.00

Mechanical Ventilation

Mechanical Ventilation System Present

No

20.0 Fans, Open Fireplaces, Flues

SUMMARY FOR INPUT DATA

Calculation Type: New Build (As Designed)

	MHS	SHS	Other	Total
Number of Chimneys	0		0	0
Number of open flues	0		0	0
Number of intermittent fans				2
Number of passive vents				0
Number of flueless gas fires				0

21.0 Fixed Cooling System

22.0 Lighting

Internal

Total number of light fittings

Total number of L.E.L. fittings

Percentage of L.E.L. fittings %

External

External lights fitted

23.0 Electricity Tariff

24.0 Main Heating 1

Percentage of Heat %

Main Heating

SAP Code

Efficiency (SAP Table) %

Controls

PCDF Controls

Delayed Start Stat

Sap Code

Is MHS Pumped

Heat Emitter

25.0 Main Heating 2

Percentage of Heat %

Database Ref. No.

Fuel Type

Main Heating

SAP Code

In Summer

Controls

Sap Code

Community Heating

28.0 Water Heating

Water Heating

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

SUMMARY FOR INPUT DATA

Calculation Type: New Build (As Designed)

Solar Panel	No
Water use <= 125 litres/person/day	Yes
SAP Code	914
Immersion Only Heating Hot Water	No

28.2 Waste Water Heat Recovery System

Total rooms with shower and/or bath 1

Instantaneous System 1

Database ID	80003
Brand Model	Showersave, Recoh-vert RV3
Details	Year: 2011 + 2017 Efficiency: 61.2 Utilisation factor: 0.973
Number of mixer showers in rooms with a bath	0
Number of mixer showers in rooms without a bath	0

29.0 Hot Water Cylinder

Internal Store	
Insulation Type	Measured Loss
Cylinder Volume	150.00 L
Loss	1.320 kWh/day

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None